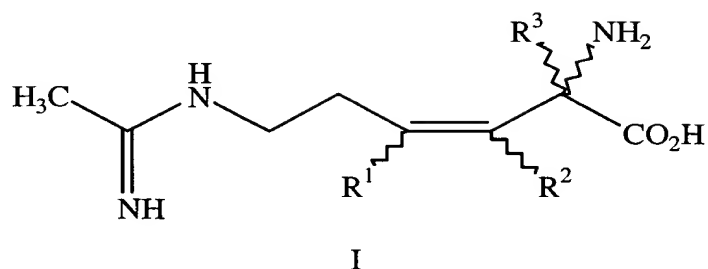


What is Claimed:

1. A compound of Formula I:



or a pharmaceutically acceptable salt thereof, wherein:

10 R^1 is selected from the group consisting of hydrogen, halo, and C_1 - C_5 alkyl, said C_1 - C_5 alkyl optionally substituted by halo or alkoxy, said alkoxy optionally substituted by one or more halo;

R^2 is selected from the group consisting of hydrogen, halo, and C_1 - C_5 alkyl, said C_1 - C_5 alkyl optionally substituted by halo or alkoxy, said alkoxy optionally substituted by one or more halo; and

15 R^3 is C_1 - C_5 alkyl, said C_1 - C_5 alkyl optionally substituted by halo or alkoxy, said alkoxy optionally substituted by one or more halo.

20 2. The compound of claim 1 wherein the compound is the Z isomer.

3. The compound of claim 2 wherein:

R^1 is selected from the group consisting of hydrogen, halo, and C_1 - C_5 alkyl, said C_1 - C_5 alkyl optionally substituted by halo or alkoxy, said alkoxy optionally substituted by one or more halo;

R^2 is selected from the group consisting of hydrogen, halo and C_1 - C_5 alkyl, said C_1 - C_5 alkyl optionally substituted by halo or alkoxy, said alkoxy optionally substituted by one or more halo; and
 R^3 is C_1 - C_5 alkyl, said C_1 - C_5 alkyl optionally substituted by halo or alkoxy.

5

4. The compound of claim 3 wherein:

R^1 is selected from the group consisting of hydrogen, halo, and C_1 - C_3 alkyl;
 R^2 is selected from the group consisting of hydrogen, halo and C_1 - C_3 alkyl;
and

10

R^3 is C_1 - C_5 alkyl, said C_1 - C_5 alkyl optionally substituted by fluorine or alkoxy.

5. The compound of claim 3 wherein:

R^1 is selected from the group consisting of hydrogen, halo, and C_1 - C_3 alkyl;
said C_1 - C_5 alkyl optionally substituted by halo or alkoxy, said alkoxy optionally substituted by one or more halo;

15

R^2 is selected from the group consisting of hydrogen, halo and C_1 - C_5 alkyl;
and

R^3 is C_1 - C_5 alkyl, said C_1 - C_5 alkyl optionally substituted by halo or alkoxy.

20

6. The compound of claim 3 wherein:

R^1 is selected from the group consisting of hydrogen, halo, and C_1 - C_3 alkyl;
 R^2 is selected from the group consisting of hydrogen, halo and C_1 - C_3 alkyl;
and

25

R^3 is C_1 - C_3 alkyl optionally substituted by fluorine.

7. The compound of claim 3 wherein:

R^1 is selected from the group consisting of hydrogen, halo, and C_1 - C_3 alkyl;
 R^2 is selected from the group consisting of hydrogen, halo and C_1 - C_3 alkyl;
and

30

R^3 is C_1 - C_3 alkyl.

8. The compound of claim 3 wherein:

R^1 is hydrogen;

5 R^2 is selected from the group consisting of hydrogen, halo and C_1 - C_3 alkyl;

and

R^3 is C_1 - C_3 alkyl.

9. The compound of claim 8 wherein:

10 R^1 is hydrogen;

R^2 is selected from the group consisting of hydrogen and halo; and

R^3 is C_1 - C_3 alkyl.

10. The compound of claim 9 wherein:

15 R^1 is hydrogen;

R^2 is selected from the group consisting of hydrogen and fluorine; and

R^3 is C_1 - C_3 alkyl.

11. The compound of claim 10 wherein:

20 R^1 is hydrogen;

R^2 is selected from the group consisting of hydrogen and fluorine; and

R^3 is methyl.

12. The compound of claim 11 wherein:

25 R^1 is hydrogen;

R^2 is hydrogen; and

R^3 is methyl.

13. The compound of claim 11 wherein:

30 R^1 is hydrogen;

R^2 is fluorine; and

R^3 is methyl.

14. The compound of claim 3 wherein:

5 R^1 is halo;

R^2 is selected from the group consisting of hydrogen, halo and C_1 - C_3 alkyl;

and

R^3 is C_1 - C_3 alkyl.

10 15. The compound of claim 14 wherein:

R^1 is halo;

R^2 is halo; and

R^3 is C_1 - C_3 alkyl.

15 16. The compound of claim 15 wherein:

R^1 is fluorine;

R^2 is fluorine; and

R^3 is methyl.

20 17. The compound of claim 14 wherein:

R^1 is fluorine;

R^2 is selected from the group consisting of hydrogen and C_1 - C_3 alkyl; and

R^3 is methyl.

25 18. The compound of claim 17 wherein:

R^1 is fluorine;

R^2 is hydrogen; and

R^3 is methyl.

30 19. The compound of claim 3 wherein:

5 20. The compound of claim 3 wherein:
 R¹ is hydrogen;
 R² is methyl; and
 R³ is methyl.

15 22. The compound of claim 2 wherein:
R¹ is selected from the group consisting of hydrogen, halo and C₁-C₅ alkyl,
said C₁-C₅ alkyl optionally substituted by alkoxy or one or more fluorine;
R² is selected from the group consisting of hydrogen, halo and C₁-C₅ alkyl,
said C₁-C₅ alkyl optionally substituted by alkoxy or one or more fluorine;
20 and
R³ is methyl optionally substituted by one or more alkoxy or halo.

23. The compound of claim 22 wherein:
R¹ is selected from the group consisting of hydrogen and fluorine;
25 R² is C₁-C₃ alkyl substituted by one or more halo; and
R³ is methyl.

24. The compound of claim 23 wherein:

R¹ is hydrogen;

R² is CH₂F; and

R³ is methyl.

25. The compound of claim 22 wherein:
R¹ is CH₂F;
R² is hydrogen; and
5 R³ is methyl.

26. The compound of claim 22 wherein:
R¹ is hydrogen;
R² is hydrogen; and
10 R³ is CH₂F.

27. The compound of claim 22 wherein:
R¹ is hydrogen;
R² is methoxymethyl; and
15 R³ is methyl.

28. The compound of claim 22 wherein:
R¹ is methoxymethyl;
R² is hydrogen; and
20 R³ is methyl.

29. The compound of claim 22 wherein:
R¹ is hydrogen;
R² is hydrogen; and
25 R³ is methoxymethyl.

30. The compound of claim 1 wherein the compound is the E isomer.

31. The compound of claim 30 wherein:

R^1 is selected from the group consisting of hydrogen, halo, and C_1 - C_5 alkyl, said C_1 - C_5 alkyl optionally substituted by halo or alkoxy, said alkoxy optionally substituted by one or more halo;

5 R^2 is selected from the group consisting of hydrogen, halo and C_1 - C_5 alkyl, said C_1 - C_5 alkyl optionally substituted by halo or alkoxy, said alkoxy optionally substituted by one or more halo; and

R^3 is C_1 - C_5 alkyl, said C_1 - C_5 alkyl optionally substituted by one or more halo or alkoxy.

10 32. The compound of claim 31 wherein:

R^1 is selected from the group consisting of hydrogen, halo, and C_1 - C_3 alkyl; said C_1 - C_5 alkyl optionally substituted by halo or alkoxy, said alkoxy optionally substituted by one or more halo;

15 R^2 is selected from the group consisting of hydrogen, halo and C_1 - C_5 alkyl; and

R^3 is C_1 - C_5 alkyl, said C_1 - C_5 alkyl optionally substituted by halo or alkoxy.

20 33. The compound of claim 31 wherein:

R^1 is selected from the group consisting of hydrogen, halo, and C_1 - C_3 alkyl;

R^2 is selected from the group consisting of hydrogen, halo and C_1 - C_3 alkyl; and

R^3 is C_1 - C_3 alkyl optionally substituted by fluorine.

25 34. The compound of claim 31 wherein:

R^1 is selected from the group consisting of hydrogen, halo, and C_1 - C_3 alkyl;

R^2 is selected from the group consisting of hydrogen, halo and C_1 - C_3 alkyl; and

R^3 is C_1 - C_5 alkyl, said C_1 - C_5 alkyl optionally substituted by fluorine or alkoxy.

30

35. The compound of claim 31 wherein:

R¹ is selected from the group consisting of hydrogen, halo, and C₁-C₃ alkyl;
R² is selected from the group consisting of hydrogen, halo and C₁-C₃ alkyl;
and
R³ is C₁-C₃ alkyl.

5

36. The compound of claim 31 wherein:

R¹ is hydrogen;

R² is selected from the group consisting of hydrogen, halo and C₁-C₃ alkyl;

and

10

R³ is C₁-C₃ alkyl.

37. The compound of claim 36 wherein:

R¹ is hydrogen;

R² is selected from the group consisting of hydrogen and halo; and

15

R³ is C₁-C₃ alkyl.

38. The compound of claim 37 wherein:

R¹ is hydrogen;

R² is selected from the group consisting of hydrogen and fluorine; and

20

R³ is C₁-C₃ alkyl.

39. The compound of claim 38 wherein:

R¹ is hydrogen;

R² is selected from the group consisting of hydrogen and fluorine; and

25

R³ is methyl.

40. The compound of claim 39 wherein:

R¹ is hydrogen;

R² is hydrogen; and

30

R³ is methyl.

R³ is methyl.

R³ is C₁-C₃ alkyl.

R³ is C₁-C₃ alkyl.

R^3 is methyl.

R^3 is methyl.

R² is hydrogen; and

R³ is methyl.

47. The compound of claim 31 wherein:

R¹ is methyl;

5 R² is hydrogen; and

R³ is methyl.

48. The compound of claim 31 wherein:

R¹ is hydrogen;

10 R² is methyl; and

R³ is methyl.

49. The compound of claim 31 wherein:

R¹ is methyl;

15 R² is methyl; and

R³ is methyl.

50. The compound of claim 30 wherein:

20 R¹ is selected from the group consisting of hydrogen, halo and C₁-C₅ alkyl,
said C₁-C₅ alkyl optionally substituted by alkoxy or one or more fluorine;

R² is selected from the group consisting of hydrogen, halo and C₁-C₅ alkyl,
said C₁-C₅ alkyl optionally substituted by alkoxy or one or more fluorine;
and

25 R³ is methyl optionally substituted by alkoxy or one or more halo.

51. The compound of claim 50 wherein:

R¹ is selected from the group consisting of hydrogen and fluorine;

R² is C₁-C₃ alkyl substituted by one or more halo; and

30 R³ is methyl.

52. The compound of claim 51 wherein:

R² is CH₂F; and

R³ is methyl.

R¹ is CH₂F;

R² is hydrogen; and

R³ is methyl.

R¹ is hydrogen;

R² is hydrogen; and

R^3 is CH_2F .

R¹ is hydrogen;

R² is methoxymethyl; and

R³ is methyl.

R¹ is methoxymethyl;

R² is hydrogen; and

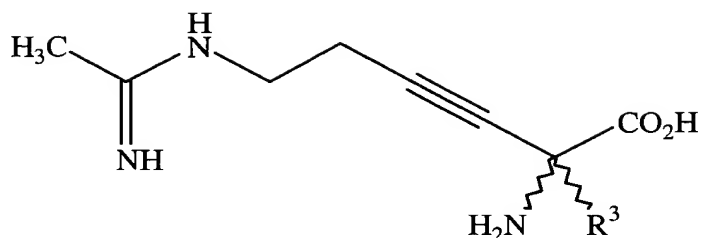
R³ is methyl.

R¹ is hydrogen;

R² is hydrogen; and

R³ is methoxymethyl.

30 58. A compound of Formula II



II

5 or a pharmaceutically acceptable salt thereof, wherein:
 R^3 is C_1 - C_5 alkyl, said C_1 - C_5 alkyl optionally substituted by halo or alkoxy,
 said alkoxy optionally substituted by one or more halo.

10 59. The compound of claim 58 wherein:
 R^3 is C_1 - C_5 alkyl substituted by one or more halo.

60. The compound of claim 59 wherein:
 R^3 is C_1 - C_5 alkyl substituted by one or more fluorine.

15 61. The compound of claim 59 wherein:
 R^3 is methyl substituted by one or more halo.

62. The compound of claim 61 wherein:
 R^3 is methyl substituted by one or more fluorine.

20 63. The compound of claim 61 wherein:
 R^3 is CH_2F .

25 64. The compound recited in claim 59 wherein:
 R^3 is C_1 - C_5 alkyl substituted by alkoxy.

65. The compound of claim 64 wherein:

Puba 15

R^3 is methoxy methyl.

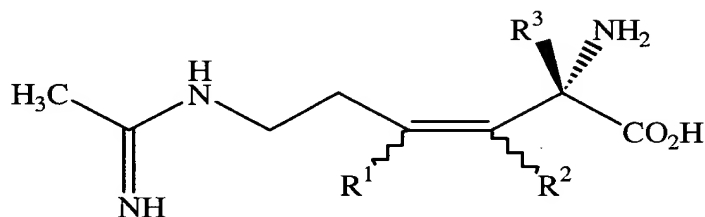
66. The compound of claim 59 wherein:

R^3 is C_1 - C_5 alkyl.

67. The compound of claim 65 wherein:

R^3 is methyl.

68. A compound of Formula III



III

or a pharmaceutically acceptable salt thereof, wherein:

R^1 is selected from the group consisting of hydrogen, halo, and C_1 - C_5 alkyl, said C_1 - C_5 alkyl optionally substituted by halo or alkoxy, said alkoxy optionally substituted by one or more halo;

R^2 is selected from the group consisting of hydrogen, halo, and C_1 - C_5 alkyl, said C_1 - C_5 alkyl optionally substituted by halo or alkoxy, said alkoxy optionally substituted by one or more halo; and

R^3 is C_1 - C_5 alkyl, said C_1 - C_5 alkyl optionally substituted by halo or alkoxy, said alkoxy optionally substituted by one or more halo.

69. The compound of claim 68 wherein the compound is the Z isomer.

70. The compound of claim 69 wherein:

R¹ is selected from the group consisting of hydrogen, halo, and C₁-C₅ alkyl, said C₁-C₅ alkyl optionally substituted by halo or alkoxy, said alkoxy optionally substituted by one or more halo;

5 R² is selected from the group consisting of hydrogen, halo and C₁-C₅ alkyl, said C₁-C₅ alkyl optionally substituted by halo or alkoxy, said alkoxy optionally substituted by one or more halo; and

R³ is C₁-C₅ alkyl, said C₁-C₅ alkyl optionally substituted by one or more halo or alkoxy.

Pub any

71. The compound of claim 69 wherein:

R¹ is selected from the group consisting of hydrogen, halo, and C₁-C₃ alkyl; said C₁-C₅ alkyl optionally substituted by halo or alkoxy, said alkoxy optionally substituted by one or more halo;

15 R² is selected from the group consisting of hydrogen, halo and C₁-C₅ alkyl; and

R³ is C₁-C₅ alkyl, said C₁-C₅ alkyl optionally substituted by halo or alkoxy

72. The compound of claim 69 wherein:

R¹ is selected from the group consisting of hydrogen, halo, and C₁-C₃ alkyl;

20 R² is selected from the group consisting of hydrogen, halo and C₁-C₃ alkyl; and

R³ is C₁-C₃ alkyl optionally substituted by fluorine.

73. The compound of claim 70 wherein:

25 R¹ is selected from the group consisting of hydrogen, halo, and C₁-C₃ alkyl;

R² is selected from the group consisting of hydrogen, halo and C₁-C₃ alkyl; and

R³ is C₁-C₅ alkyl, said C₁-C₅ alkyl optionally substituted by fluorine or alkoxy.

74. The compound of claim 70 wherein:

R¹ is selected from the group consisting of hydrogen, halo, and C₁-C₃ alkyl;

R² is selected from the group consisting of hydrogen, halo and C₁-C₃ alkyl;

and

5 R³ is C₁-C₃ alkyl.

75. The compound of claim 70 wherein:

R¹ is hydrogen;

R² is selected from the group consisting of hydrogen, halo and C₁-C₃ alkyl;

10 and

R³ is C₁-C₃ alkyl.

76. The compound of claim 75 wherein:

R¹ is hydrogen;

15 R² is selected from the group consisting of hydrogen and halo; and

R³ is C₁-C₃ alkyl.

77. The compound of claim 76 wherein:

R¹ is hydrogen;

20 R² is selected from the group consisting of hydrogen and fluorine; and

R³ is C₁-C₃ alkyl.

78. The compound of claim 77 wherein:

R¹ is hydrogen;

25 R² is selected from the group consisting of hydrogen and fluorine; and

R³ is methyl.

79. The compound of claim 78 wherein:

R¹ is hydrogen;

30 R² is hydrogen; and

R³ is methyl.

80. The compound of claim 78 wherein:

R¹ is hydrogen;

5 R² is fluorine; and

R³ is methyl.

81. The compound of claim 70 wherein:

R¹ is halo;

10 R² is selected from the group consisting of hydrogen, halo and C₁-C₃ alkyl;

and

R³ is C₁-C₃ alkyl.

82. The compound of claim 81 wherein:

15 R¹ is halo;

R² is halo; and

R³ is C₁-C₃ alkyl.

83. The compound of claim 82 wherein:

20 R¹ is fluorine;

R² is fluorine; and

R³ is methyl.

84. The compound of claim 81 wherein:

25 R¹ is fluorine;

R² is selected from the group consisting of hydrogen and C₁-C₃ alkyl; and

R³ is methyl.

85. The compound of claim 84 wherein:

30 R¹ is fluorine;

R^2 is hydrogen; and
 R^3 is methyl.

5 86. The compound of claim 70 wherein:
 R^1 is methyl;
 R^2 is hydrogen; and
 R^3 is methyl.

10 87. The compound of claim 70 wherein:
 R^1 is hydrogen;
 R^2 is methyl; and
 R^3 is methyl.

15 88. The compound of claim 70 wherein:
 R^1 is methyl;
 R^2 is methyl; and
 R^3 is methyl.

20 89. The compound of claim 69 wherein:
 R^1 is selected from the group consisting of hydrogen, halo and C_1 - C_5 alkyl,
said C_1 - C_5 alkyl optionally substituted by alkoxy or one or more fluorine;
 R^2 is selected from the group consisting of hydrogen, halo and C_1 - C_5 alkyl,
said C_1 - C_5 alkyl optionally substituted by alkoxy or one or more fluorine;
and
25 R^3 is methyl optionally substituted by one or more alkoxy or halo.

30 90. The compound of claim 89 wherein:
 R^1 is selected from the group consisting of hydrogen and fluorine;
 R^2 is C_1 - C_3 alkyl substituted by one or more halo; and
 R^3 is methyl.

91. The compound of claim 90 wherein:

R^1 is hydrogen;

R^2 is CH_2F ; and

R^3 is methyl.

5

92. The compound of claim 89 wherein:

R^1 is CH_2F ;

R^2 is hydrogen; and

R^3 is methyl.

10

93. The compound of claim 89 wherein:

R^1 is hydrogen;

R^2 is hydrogen; and

R^3 is CH_2F .

15

94. The compound of claim 89 wherein:

R^1 is hydrogen;

R^2 is methoxymethyl; and

R^3 is methyl.

20

95. The compound of claim 89 wherein:

R^1 is methoxymethyl;

R^2 is hydrogen; and

R^3 is methyl.

25

96. The compound of claim 89 wherein:

R^1 is hydrogen;

R^2 is hydrogen; and

R^3 is methoxymethyl.

30

US 2006/019969 A1

5

10

15

20

R² is selected from the group consisting of hydrogen, halo and C₁-C₃ alkyl; and

R³ is C₁-C₅ alkyl, said C₁-C₅ alkyl optionally substituted by one or more fluorine or alkoxy.

102. The compound of claim 98 wherein:

5 R¹ is selected from the group consisting of hydrogen, halo, and C₁-C₃ alkyl;
R² is selected from the group consisting of hydrogen, halo and C₁-C₃ alkyl;
and
R³ is C₁-C₃ alkyl.

10 103. The compound of claim 98 wherein:

R¹ is hydrogen;
R² is selected from the group consisting of hydrogen, halo and C₁-C₃ alkyl;
and
R³ is C₁-C₃ alkyl.

15

104. The compound of claim 103 wherein:

R¹ is hydrogen;
R² is selected from the group consisting of hydrogen and halo; and
R³ is C₁-C₃ alkyl.

20

105. The compound of claim 104 wherein:

R¹ is hydrogen;
R² is selected from the group consisting of hydrogen and fluorine; and
R³ is C₁-C₃ alkyl.

25

106. The compound of claim 105 wherein:

R¹ is hydrogen;
R² is selected from the group consisting of hydrogen and fluorine; and
R³ is methyl.

30

107. The compound of claim 106 wherein:

R¹ is hydrogen;

R² is hydrogen; and

R³ is methyl.

5

108. The compound of claim 106 wherein:

R¹ is hydrogen;

R² is fluorine; and

R³ is methyl.

10

109. The compound of claim 98 wherein:

R¹ is halo;

R² is selected from the group consisting of hydrogen, halo and C₁-C₃ alkyl;

and

15

R³ is C₁-C₃ alkyl.

110. The compound of claim 109 wherein:

R¹ is halo;

R² is halo; and

20

R³ is C₁-C₃ alkyl.

111. The compound of claim 110 wherein:

R¹ is fluorine;

R² is fluorine; and

25

R³ is methyl.

112. The compound of claim 109 wherein:

R¹ is fluorine;

R² is selected from the group consisting of hydrogen and C₁-C₃ alkyl; and

30

R³ is methyl.

113. The compound of claim 112 wherein:

R¹ is fluorine;

R^2 is hydrogen; and

R³ is methyl.

114. The compound of claim 98 wherein:

R¹ is methyl;

R^2 is hydrogen; and

R³ is methyl.

115. The compound of claim 98 wherein:

R¹ is hydrogen;

R² is methyl; and

R^3 is methyl.

116. The compound of claim 98 wherein:

R¹ is methyl;

R² is methyl; and

R³ is methyl.

117. The compound of claim 97 wherein:

R¹ is selected from the group consisting of hydrogen, halo and C₁-C₅ alkyl, said C₁-C₅ alkyl optionally substituted by alkoxy or one or more fluorine;

R² is selected from the group consisting of hydrogen, halo and C₁-C₅ alkyl, said C₁-C₅ alkyl optionally substituted by alkoxy or one or more fluorine;

and

R³ is methyl optionally substituted by one or more alkoxy or halo.

118. The compound of claim 117 wherein:

R¹ is selected from the group consisting of hydrogen and fluorine;

R^2 is C_1 - C_3 alkyl substituted by one or more halo; and
 R^3 is methyl.

119. The compound of claim 118 wherein:
5 R^1 is hydrogen;
 R^2 is CH_2F ; and
 R^3 is methyl.

120. The compound of claim 117 wherein:
10 R^1 is CH_2F ;
 R^2 is hydrogen; and
 R^3 is methyl.

121. The compound of claim 117 wherein:
15 R^1 is hydrogen;
 R^2 is hydrogen; and
 R^3 is CH_2F .

122. The compound of claim 117 wherein:
20 R^1 is hydrogen;
 R^2 is methoxymethyl; and
 R^3 is methyl.

123. The compound of claim 117 wherein:
25 R^1 is methoxymethyl;
 R^2 is hydrogen; and
 R^3 is methyl.

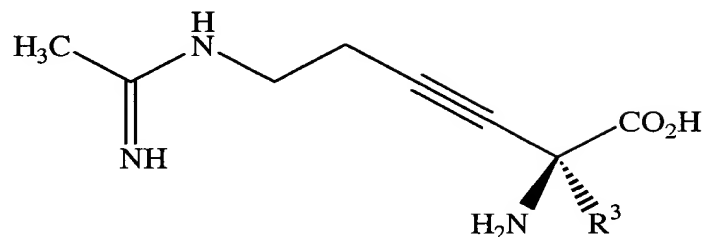
124. The compound of claim 117 wherein:
30 R^1 is hydrogen;

Pub. No. 3,366,100

R^2 is hydrogen; and
 R^3 is methoxymethyl.

125. A compound of Formula IV

5



IV

or a pharmaceutically acceptable salt thereof, wherein:

10 R^3 is $\text{C}_1\text{-C}_5$ alkyl, said $\text{C}_1\text{-C}_5$ alkyl optionally substituted by halo or alkoxy, said alkoxy optionally substituted by one or more halo.

126. The compound of claim 125 wherein:

R^3 is $\text{C}_1\text{-C}_5$ alkyl substituted by one or more halo.

15

127. The compound of claim 126 wherein:

R^3 is $\text{C}_1\text{-C}_5$ alkyl substituted by one or more fluorine.

128. The compound of claim 126 wherein:

20 R^3 is methyl substituted by one or more halo.

129. The compound of claim 128 wherein:

R^3 is methyl substituted by one or more fluorine.

25 130. The compound of claim 128 wherein:

R^3 is CH_2F .

Pat A16

131. The compound recited in claim 126 wherein:
 R^3 is C_1 - C_5 alkyl substituted by alkoxy.

5

132. The compound of claim 131 wherein:
 R^3 is methoxy methyl.

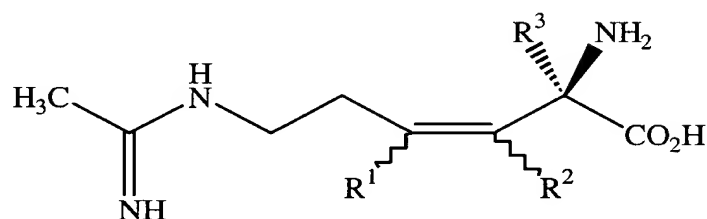
Pat A12

10

133. The compound of claim 126 wherein:
 R^3 is C_1 - C_5 alkyl.

134. The compound of claim 132 wherein:
 R^3 is methyl.

135. A compound of Formula V



15

V

or a pharmaceutically acceptable salt thereof, wherein:

- 20 R^1 is selected from the group consisting of hydrogen, halo, and C_1 - C_5 alkyl, said C_1 - C_5 alkyl optionally substituted by halo or alkoxy, said alkoxy optionally substituted by one or more halo;
- R^2 is selected from the group consisting of hydrogen, halo, and C_1 - C_5 alkyl, said C_1 - C_5 alkyl optionally substituted by halo or alkoxy, said alkoxy optionally substituted by one or more halo; and
- 25 R^3 is C_1 - C_5 alkyl, said C_1 - C_5 alkyl optionally substituted by halo or alkoxy, said alkoxy optionally substituted by one or more halo.

136. The compound of claim 135 wherein the compound is the Z isomer.

137. The compound of claim 136 wherein:

R¹ is selected from the group consisting of hydrogen, halo, and C₁-C₅ alkyl, said C₁-C₅ alkyl optionally substituted by halo or alkoxy, said alkoxy optionally substituted by one or more halo;

R² is selected from the group consisting of hydrogen, halo and C₁-C₅ alkyl, said C₁-C₅ alkyl optionally substituted by halo or alkoxy, said alkoxy optionally substituted by one or more halo; and

R³ is C₁-C₅ alkyl, said C₁-C₅ alkyl optionally substituted by halo or alkoxy.

~~138.~~ The compound of claim 137 wherein:

~~R¹ is selected from the group consisting of hydrogen, halo, and C₁-C₃ alkyl; said C₁-C₅ alkyl optionally substituted by halo or alkoxy, said alkoxy optionally substituted by one or more halo;~~

~~R² is selected from the group consisting of hydrogen, halo and C₁-C₅ alkyl;
and~~

R³ is C₁-C₅ alkyl, said C₁-C₅ alkyl optionally substituted by halo or alkoxy

139. The compound of claim 137 wherein:

R¹ is selected from the group consisting of hydrogen, halo, and C₁-C₃ alkyl;

R² is selected from the group consisting of hydrogen, halo and C₁-C₃ alkyl;
and

R³ is C₁-C₃ alkyl optionally substituted by fluorine.

140. The compound of claim 136 wherein:

R¹ is selected from the group consisting of hydrogen, halo, and C₁-C₃ alkyl;

R² is selected from the group consisting of hydrogen, halo and C₁-C₃ alkyl;
and

R^3 is C_1 - C_5 alkyl, said C_1 - C_5 alkyl optionally substituted by fluorine or alkoxy.

141. The compound of claim 137 wherein:

- 5 R^1 is selected from the group consisting of hydrogen, halo, and C_1 - C_3 alkyl;
 R^2 is selected from the group consisting of hydrogen, halo and C_1 - C_3 alkyl;
and
 R^3 is C_1 - C_3 alkyl.

10 142. The compound of claim 137 wherein:

- R^1 is hydrogen;
 R^2 is selected from the group consisting of hydrogen, halo and C_1 - C_3 alkyl;
and
 R^3 is C_1 - C_3 alkyl.

15 143. The compound of claim 142 wherein:

- R^1 is hydrogen;
 R^2 is selected from the group consisting of hydrogen and halo; and
 R^3 is C_1 - C_3 alkyl.

20 144. The compound of claim 143 wherein:

- R^1 is hydrogen;
 R^2 is selected from the group consisting of hydrogen and fluorine; and
 R^3 is C_1 - C_3 alkyl.

25 145. The compound of claim 144 wherein:

- R^1 is hydrogen;
 R^2 is selected from the group consisting of hydrogen and fluorine; and
 R^3 is methyl.

30

146. The compound of claim 145 wherein:

R¹ is hydrogen;

R² is hydrogen; and

R³ is methyl.

5

147. The compound of claim 145 wherein:

R¹ is hydrogen;

R² is fluorine; and

R³ is methyl.

10

148. The compound of claim 137 wherein:

R¹ is halo;

R² is selected from the group consisting of hydrogen, halo and C₁-C₃ alkyl;

and

15

R³ is C₁-C₃ alkyl.

149. The compound of claim 148 wherein:

R¹ is halo;

R² is halo; and

20

R³ is C₁-C₃ alkyl.

150. The compound of claim 149 wherein:

R¹ is fluorine;

R² is fluorine; and

25

R³ is methyl.

151. The compound of claim 148 wherein:

R¹ is fluorine;

R² is selected from the group consisting of hydrogen and C₁-C₃ alkyl; and

30

R³ is methyl.

005493-04504
105493-04504

152. The compound of claim 151 wherein:

R¹ is fluorine;

R² is hydrogen; and

5 R³ is methyl.

153. The compound of claim 137 wherein:

R¹ is methyl;

R² is hydrogen; and

10 R³ is methyl.

154. The compound of claim 137 wherein:

R¹ is hydrogen;

R² is methyl; and

15 R³ is methyl.

155. The compound of claim 137 wherein:

R¹ is methyl;

R² is methyl; and

20 R³ is methyl.

156. The compound of claim 136 wherein:

R¹ is selected from the group consisting of hydrogen, halo and C₁-C₅ alkyl, said C₁-C₅ alkyl optionally substituted by alkoxy or one or more fluorine;

25 R² is selected from the group consisting of hydrogen, halo and C₁-C₅ alkyl, said C₁-C₅ alkyl optionally substituted by alkoxy or one or more fluorine; and

R³ is C₁-C₅ alkyl optionally substituted by alkoxy or one or more halo.

30 157. The compound of claim 156 wherein:

R¹ is selected from the group consisting of hydrogen and fluorine;

R^2 is C_1 - C_3 alkyl substituted by one or more halo; and
 R^3 is methyl.

5 158. The compound of claim 157 wherein:
 R^1 is hydrogen;
 R^2 is CH_2F ; and
 R^3 is methyl.

10 159. The compound of claim 156 wherein:
 R^1 is CH_2F ;
 R^2 is hydrogen; and
 R^3 is methyl.

15 160. The compound of claim 159 wherein:
 R^1 is hydrogen;
 R^2 is hydrogen; and
 R^3 is CH_2F .

20 161. The compound of claim 159 wherein:
 R^1 is hydrogen;
 R^2 is methoxymethyl; and
 R^3 is methyl.

25 162. The compound of claim 156 wherein:
 R^1 is methoxymethyl;
 R^2 is hydrogen; and
 R^3 is methyl.

30 163. The compound of claim 156 wherein:
 R^1 is hydrogen;

005193-00 88415600

Pat. A19

R^2 is hydrogen; and
 R^3 is methoxymethyl.

164. The compound of claim 135 wherein the compound is the E isomer.

5

165. The compound of claim 164 wherein:

R^1 is selected from the group consisting of hydrogen, halo, and C_1 - C_5 alkyl, said C_1 - C_5 alkyl optionally substituted by halo or alkoxy, said alkoxy optionally substituted by one or more halo;

10

R^2 is selected from the group consisting of hydrogen, halo and C_1 - C_5 alkyl, said C_1 - C_5 alkyl optionally substituted by halo or alkoxy, said alkoxy optionally substituted by one or more halo; and

R^3 is C_1 - C_5 alkyl, said C_1 - C_5 alkyl optionally substituted by one or more halo or alkoxy.

15

166. The compound of claim 165 wherein:

R^1 is selected from the group consisting of hydrogen, halo, and C_1 - C_3 alkyl; said C_1 - C_5 alkyl optionally substituted by halo or alkoxy, said alkoxy optionally substituted by one or more halo;

20

R^2 is selected from the group consisting of hydrogen, halo and C_1 - C_5 alkyl; and

R^3 is C_1 - C_5 alkyl, said C_1 - C_5 alkyl optionally substituted by halo or alkoxy

167. The compound of claim 165 wherein:

25

R^1 is selected from the group consisting of hydrogen, halo, and C_1 - C_3 alkyl;

R^2 is selected from the group consisting of hydrogen, halo and C_1 - C_3 alkyl; and

R^3 is C_1 - C_3 alkyl optionally substituted by fluorine.

30

168. The compound of claim 165 wherein:

TOPTOP 20240501

pub 920

R^1 is selected from the group consisting of hydrogen, halo, and C_1-C_3 alkyl;

R^2 is selected from the group consisting of hydrogen, halo and C_1-C_3 alkyl;

and

R^3 is C_1-C_5 alkyl, said C_1-C_5 alkyl optionally substituted by fluorine or

5 alkoxy.

169. The compound of claim 165 wherein:

R^1 is selected from the group consisting of hydrogen, halo, and C_1-C_3 alkyl;

R^2 is selected from the group consisting of hydrogen, halo and C_1-C_3 alkyl;

and

R^3 is C_1-C_3 alkyl.

170. The compound of claim 165 wherein:

R^1 is hydrogen;

R^2 is selected from the group consisting of hydrogen, halo and C_1-C_3 alkyl;

and

R^3 is C_1-C_3 alkyl.

171. The compound of claim 170 wherein:

R^1 is hydrogen;

R^2 is selected from the group consisting of hydrogen and halo; and

R^3 is C_1-C_3 alkyl.

172. The compound of claim 171 wherein:

R^1 is hydrogen;

R^2 is selected from the group consisting of hydrogen and fluorine; and

R^3 is C_1-C_3 alkyl.

173. The compound of claim 172 wherein:

R^1 is hydrogen;

R^2 is selected from the group consisting of hydrogen and fluorine; and
 R^3 is methyl.

174. The compound of claim 172 wherein:

5 R^1 is hydrogen;
 R^2 is hydrogen; and
 R^3 is methyl.

175. The compound of claim 173 wherein:

10 R^1 is hydrogen;
 R^2 is fluorine; and
 R^3 is methyl.

176. The compound of claim 165 wherein:

15 R^1 is halo;
 R^2 is selected from the group consisting of hydrogen, halo and C_1 - C_3 alkyl;
and
 R^3 is C_1 - C_3 alkyl.

177. The compound of claim 176 wherein:

20 R^1 is halo;
 R^2 is halo; and
 R^3 is C_1 - C_3 alkyl.

178. The compound of claim 177 wherein:

25 R^1 is fluorine;
 R^2 is fluorine; and
 R^3 is methyl.

179. The compound of claim 176 wherein:

30

R¹ is fluorine;

R² is selected from the group consisting of hydrogen and C₁-C₃ alkyl; and

R³ is methyl.

5 180. The compound of claim 179 wherein:

R¹ is fluorine;

R² is hydrogen; and

R³ is methyl.

10 181. The compound of claim 165 wherein:

R¹ is methyl;

R^2 is hydrogen; and

R³ is methyl.

15 182. The compound of claim 165 wherein:

R¹ is hydrogen;

R² is methyl; and

R³ is methyl.

20 183. The compound of claim 165 wherein:

R¹ is methyl;

R² is methyl; and

R³ is methyl.

25 184. The compound of claim 164 wherein:

R¹ is selected from the group consisting of hydrogen, halo and C₁-C₅ alkyl, said C₁-C₅ alkyl optionally substituted by alkoxy or one or more fluorine;

R² is selected from the group consisting of hydrogen, halo and C₁-C₅ alkyl, said C₁-C₅ alkyl optionally substituted by alkoxy or one or more fluorine;

30 and

R³ is methyl optionally substituted by one or more alkoxy or halo.

185. The compound of claim 184 wherein:

R^1 is selected from the group consisting of hydrogen and fluorine;

R^2 is C_1 - C_3 alkyl substituted by one or more halo; and

5 R^3 is methyl.

186. The compound of claim 185 wherein:

R^1 is hydrogen;

R^2 is CH_2F ; and

10 R^3 is methyl.

187. The compound of claim 185 wherein:

R^1 is CH_2F ;

R^2 is hydrogen; and

15 R^3 is methyl.

188. The compound of claim 184 wherein:

R^1 is hydrogen;

R^2 is hydrogen; and

20 R^3 is CH_2F .

189. The compound of claim 184 wherein:

R^1 is hydrogen;

R^2 is methoxymethyl; and

25 R^3 is methyl.

190. The compound of claim 184 wherein:

R^1 is methoxymethyl;

R^2 is hydrogen; and

30 R^3 is methyl.

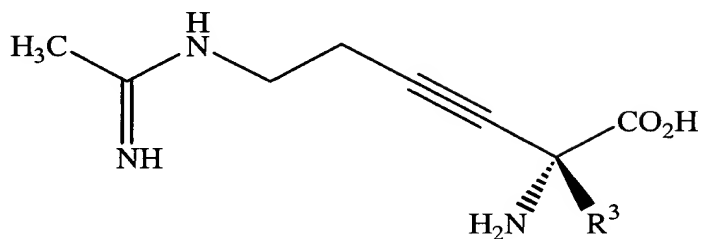
191. The compound of claim 184 wherein:

R^1 is hydrogen;

R^2 is hydrogen; and

R^3 is methoxymethyl.

192. A compound of Formula VI



VI

or a pharmaceutically acceptable salt thereof, wherein:

R^3 is C_1 - C_5 alkyl, said C_1 - C_5 alkyl optionally substituted by halo or alkoxy, said alkoxy optionally substituted by one or more halo.

193. The compound of claim 192 wherein:

R^3 is C_1 - C_5 alkyl substituted by one or more halo.

194. The compound of claim 193 wherein:

R^3 is C_1 - C_5 alkyl substituted by one or more fluorine.

195. The compound of claim 193 wherein:

R^3 is methyl substituted by one or more halo.

196. The compound of claim 195 wherein:

R^3 is methyl substituted by one or more fluorine.

197. The compound of claim 195 wherein:
 R^3 is CH_2F .

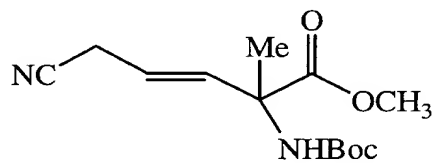
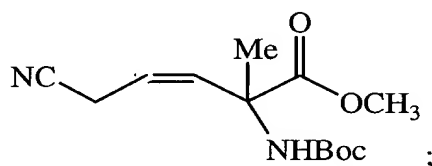
198. The compound recited in claim 193 wherein:
 R^3 is C_1 - C_5 alkyl substituted by alkoxy.

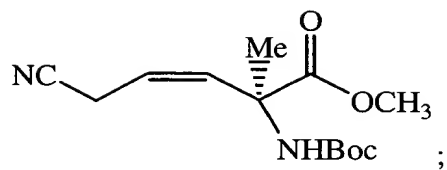
199. The compound of claim 198 wherein:
 R^3 is methoxy methyl.

200. The compound of claim 193 wherein:
 R^3 is C_1 - C_3 alkyl.

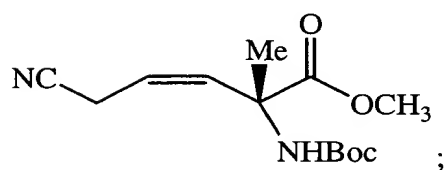
201. The compound of claim 199 wherein:
 R^3 is methyl.

202. A novel intermediate compound selected from:



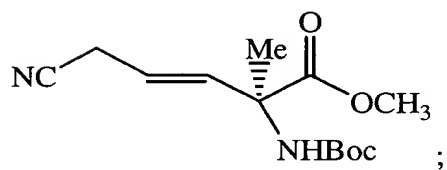


5

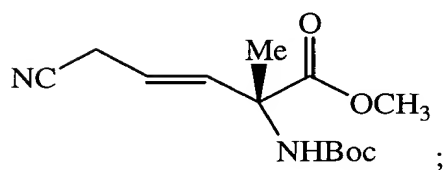


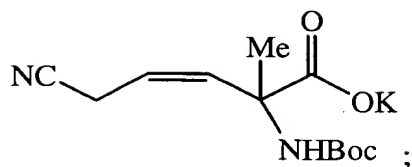
2004-03-04 14:26:00

10

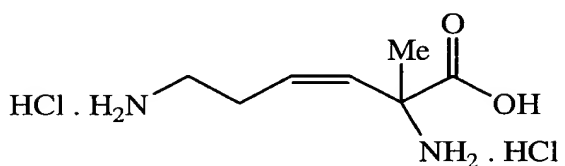
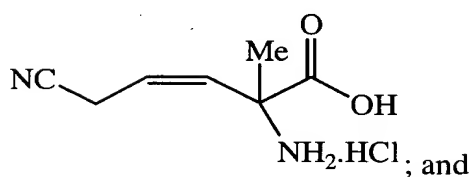


15





5



10

203. A compound selected from the group consisting of:

- 15 (3Z)-2-amino-5-(ethanimidoethylamino)-2-methylpent-3-enoic acid;
 (2S,3E)-2-amino-2-methyl-6-[(1-iminoethyl)amino]-3-hexenoic acid;
 (2S,3Z)-2-amino-2-methyl-6-[(1-iminoethyl)amino]-3-hexenoic acid;
 20 (2R,3E)-2-amino-2-methyl-6-[(1-iminoethyl)amino]-3-hexenoic acid;
 (2R,3Z)-2-amino-2-methyl-6-[(1-iminoethyl)amino]-3-hexenoic acid;
 25 (S, E)-2-amino-2-methyl-4-fluoro-6-[(1-iminoethyl)amino]-3-hexenoic acid;
 (S, E)-2-amino-2-methyl-3-fluoro-6-[(1-iminoethyl)amino]-3-hexenoic acid;
 (S, E)-2-amino-2-methyl-3,4-difluoro-6-[(1-iminoethyl)amino]-3-hexenoic acid;
 30

(3Z)-2-amino-5-(ethanimidoylamino)-2-methylpent-3-enoic acid dihydrochloride;

(2*S*,3*E*)-2-amino-2-methyl-6-[(1-iminoethyl)amino]-3-hexenoic acid, dihydrochloride;

(2*S*,3*Z*)-2-amino-2-methyl-6-[(1-iminoethyl)amino]-3-hexenoic acid, dihydrochloride;

(2R,3E)-2-amino-2-methyl-6-[(1-iminoethyl)amino]-3-hexenoic acid, dihydrochloride;

(2R,3Z)-2-amino-2-methyl-6-[(1-iminoethyl)amino]-3-hexenoic acid, dihydrochloride;

(S, E)-2-amino-2-methyl-4-fluoro-6-[(1-iminoethyl)amino]-3-hexenoic acid, dihydrochloride;

(S, E)-2-amino-2-methyl-3-fluoro-6-[(1-iminoethyl)amino]-3-hexenoic acid, dihydrochloride;

(S, E)-2-amino-2-methyl-3,4-difluoro-6-[(1-iminoethyl)amino]-3-hexenoic acid, dihydrochloride; and

2-amino-2-methyl-6-[(1-iminoethyl)amino]-3-hexynoic acid, dihydrochloride.

204. A novel intermediate compound selected from the group consisting of:

Methyl (3Z)-2-[(tert-butoxycarbonyl)amino]-5-cyano-2-methylpent-3-enoate;

Methyl (3E)-2-[(tert-butoxycarbonyl)amino]-5-cyano-2-methylpent-3-enoate;

Methyl (2S,3Z)-2-[(tert-butoxycarbonyl)amino]-5-cyano-2-methylpent-3-enoate;

Methyl (2R,3Z)-2-[(tert-butoxycarbonyl)amino]-5-cyano-2-methylpent-3-enoate;

Methyl (2S,3E)-2-[(tert-butoxycarbonyl)amino]-5-cyano-2-methylpent-3-enoate;

5 Methyl (2R,3E)-2-[(tert-butoxycarbonyl)amino]-5-cyano-2-methylpent-3-enoate;

(3Z)-2-[(tert-butoxycarbonyl)amino]-5-cyano-2-methylpent-3-enoic acid potassium salt;

10 (3Z)-2-amino-5-cyano-2-methylpent-3-enoic acid hydrochloride; and

(3Z)-2,6-diamino-2-methylhex-3-enoic acid dihydrochloride.

15

20

09241988 091500